

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE
in its capacity as elected Office

Date of mailing (day/month/year)

07 February 2001 (07.02.01)

International application No.

PCT/AU00/00655

Applicant's or agent's file reference

1172/AS

International filing date (day/month/year)

09 June 2000 (09.06.00)

Priority date (day/month/year)

10 June 1999 (10.06.99)

Applicant

PLATT, Harry, Louis et al

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

04 January 2001 (04.01.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

A. Karkachi

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1172/as	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).	
International Application No. PCT/AU00/00655	International Filing Date (day/month/year) 9 June 2000	Priority Date (day/month/year) 10 June 1999
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ H04Q 7/20; H04L 27/10		
Applicant PLATT, Harry Louis et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.																
2.	<p>This REPORT consists of a total of 3 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 1 sheet(s).</p>																
3.	<p>This report contains indications relating to the following items:</p> <table border="0"> <tr> <td>I</td> <td><input checked="" type="checkbox"/> Basis of the report</td> </tr> <tr> <td>II</td> <td><input type="checkbox"/> Priority</td> </tr> <tr> <td>III</td> <td><input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td>IV</td> <td><input type="checkbox"/> Lack of unity of invention</td> </tr> <tr> <td>V</td> <td><input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td>VI</td> <td><input type="checkbox"/> Certain documents cited</td> </tr> <tr> <td>VII</td> <td><input type="checkbox"/> Certain defects in the international application</td> </tr> <tr> <td>VIII</td> <td><input type="checkbox"/> Certain observations on the international application</td> </tr> </table>	I	<input checked="" type="checkbox"/> Basis of the report	II	<input type="checkbox"/> Priority	III	<input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	IV	<input type="checkbox"/> Lack of unity of invention	V	<input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	VI	<input type="checkbox"/> Certain documents cited	VII	<input type="checkbox"/> Certain defects in the international application	VIII	<input type="checkbox"/> Certain observations on the international application
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VII	<input type="checkbox"/> Certain defects in the international application																
VIII	<input type="checkbox"/> Certain observations on the international application																

Date of submission of the demand 4 January 2001	Date of completion of the report 11 April 2001
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer SERINEL SAMUEL Telephone No. (02) 6283 2382

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU00/00655

I. Basis of the report	
1.	<p>With regard to the elements of the international application:*</p> <p><input type="checkbox"/> the international application as originally filed.</p> <p><input checked="" type="checkbox"/> the description, pages 1-3, as originally filed, pages , filed with the demand, pages , received on with the letter of</p> <p><input checked="" type="checkbox"/> the claims, pages , as originally filed, pages , as amended (together with any statement) under Article 19, pages , filed with the demand, pages 4, received on 06 April 2001 with the letter of 05 April 2001</p> <p><input checked="" type="checkbox"/> the drawings, pages 1, as originally filed, pages , filed with the demand, pages , received on with the letter of</p> <p><input type="checkbox"/> the sequence listing part of the description: pages , as originally filed pages , filed with the demand pages , received on with the letter of</p>
2.	<p>With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.</p> <p>These elements were available or furnished to this Authority in the following language which is:</p> <p><input type="checkbox"/> the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).</p> <p><input type="checkbox"/> the language of publication of the international application (under Rule 48.3(b)).</p> <p><input type="checkbox"/> the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).</p>
3.	<p>With regard to any nucleotide and/or amino acid sequence disclosed in the international application, was on the basis of the sequence listing:</p> <p><input type="checkbox"/> contained in the international application in written form.</p> <p><input type="checkbox"/> filed together with the international application in computer readable form.</p> <p><input type="checkbox"/> furnished subsequently to this Authority in written form.</p> <p><input type="checkbox"/> furnished subsequently to this Authority in computer readable form.</p> <p><input type="checkbox"/> The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.</p> <p><input type="checkbox"/> The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished</p>
4.	<p><input type="checkbox"/> The amendments have resulted in the cancellation of:</p> <p><input type="checkbox"/> the description, pages</p> <p><input type="checkbox"/> the claims, Nos.</p> <p><input type="checkbox"/> the drawings, sheets/fig.</p>
5.	<p><input type="checkbox"/> This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**</p>
<p>* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).</p> <p>** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report</p>	

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU00/00655

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 1-3	YES
	Claims Nil	NO
Inventive step (IS)	Claims 1-3	YES
	Claims Nil	NO
Industrial applicability (IA)	Claims 1-3	YES
	Claims Nil	NO

2. Citations and explanations (Rule 70.7)

The citation EP 0351008 (Philips), discloses the use of multiplying signals from a first source with a pseudo-random code to produce a spread spectrum signal which is combined with a modulated signal so that the modulated second signal lies within the bandwidth occupied by the spread spectrum signal, with combined signals being transmitted on a single communications channel. The spread spectrum signal which is produced, lies outside the bandwidth of the speech signal bandwidth.

The arrangement of the citation does not seem to overcome the problems associated with the prior art whereby the data signals should have the same bandwidth as speech signals. The present invention as claimed in the new claim 1 discloses that two signals of the data being arranged to be in the same frequency band.

Therefore the subject matter of these claims is new and meets the requirements of Articles 33(2) & 33(3) of the PCT with regard to the requirement for novelty and inventive step.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU00/00655**A. CLASSIFICATION OF SUBJECT MATTER**Int. Cl. ⁷: H04Q 7/20, H04L 27/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: H04Q 7/IC, H04B 1/00, H04L 27/IC, A61B 5/IC

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
INSPEC

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPAT: Frequenc+, Modulat+, Transmit+, data, Mobile, wireless, multiple

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	IEEE Proceedings, Volume 135, NO. 5, issued October 1998(Pontypridd, UK) M.O. Al-Nuaimi; M. Charnley, "Simultaneous Voice and Data Transmission in Private Mobile Radio Using a Narrowband FM Channel", pages 439- 449. Page 440, LHS Column, line 60 - page 442, LHS Column, line 60.	1,2
X	US 5,458,122 A (HETHUIN) 17 October 1995, See the whole document with particular reference to the summary of the invention and column 2, line 63- column 4, line53.	1,2
X	US 5,474,090 A (BEGUN et al.) 12 December 1995, See abstract and column 2, line 53 - column 4, line 40.	1,2

☒ Further documents are listed in the continuation of Box C ☒ See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

4 August 2000

Date of mailing of the international search report

- 8 AUG 2000

Name and mailing address of the ISA/AU

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU00/00655

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0351 008 A2 (PHILIPS ELECTRONIC AND ASSOCIATED INDUSTRIES LTD), 17 January 1990, See the whole document with particular reference to column 1, lines 35-46.	1-4
X	US 4,694,471 A (BLESSER) 15 September 1987, See abstract, column 1, lines 26-51.	1,2
X	US 4,262,283 A (CHAMBERLAIN et al.) 14 April 1981, See abstract, column 1, lines 25-31.	1,2
X	US 3,986,498 A (LEWIS) 19 October 1976, See column 2, lines 6-47	1,2
X	US 3,426,150 A (William H. TYGART et al.) 04 February 1969, See column 2, lines 44-58.	1,2
A	US 3,872,252 A (MALCHMAN et al.) 18 March 1975, See abstract and figure 1.	1-4

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU00/00655

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
US	5,458,122	DE	69311860	EP	586286	FR	2695503
US	5,474,090	AU	49655/90	EP	404932		
EP	351008	DE	68922347	CA	1320770	FI	893347
		GB	2220824	JP	2132939	US	5073899
US	4,694,471	CA	1269186				
US	4,262,283	DE	2809262	AU	33771/78	CA	1096520
		FR	2382725	GB	1601942	JP	53146596
		NL	7802345	NZ	186613	SE	8205478
US	3,872,252	CA	997002	DE	2322836	FR	2220240
		GB	1445262	NL	7314509		
END OF ANNEX							

ARTICLE 19 AMENDMENTS

Our Ref: 1172/AS

5 April 2001

Commissioner of Patents
PO Box 200
WODEN ACT 2606

Sir

Re: Harry Louis Platt, Allan Michael Shell and Vladimir Jankov
PCT Patent Application No PCT/AU00/00655
Entitled: "Acoustic transmission using digital mobile phones"

Receipt is acknowledged of the written opinion dated 7 February 2001 in respect of the preliminary examination of the above referenced PCT patent application.

In response to the written opinion we enclose substitute pages 4 for old page 4.

Amendments are made to claim 1 as follows:

Page 4, line 4 after "frequency" add "wherein, the frequency modulated data signals having more than one frequency is achieved by generating a pseudo random sequence which does not overlap the frequency band of the FM data signals and mixing the sequence with the original data frequency modulated signals".

Claim 1 is amended by including in the features of old claim 3, which is subsequently deleted with old claim 4 becoming new claim 3.

With regard to the Examiner's comments regarding novelty and inventive step, the main objection is the European patent specification EP 0351008 (Phillips), which the examiner alleges prediscloses the present invention as claimed in original claims 1 to 4. The other citations which object to claims 1 and 2 are obviated as new claim 1 is amended to include the features of old claim 3.

The citation EP 0351008 (Phillips), discloses the use of multiplying signals from a first source with a pseudo-random code to produce a spread spectrum signal which is combined with a modulated signal so that the modulated second signal lies within the bandwidth occupied by the spread spectrum signal, with combined signals being transmitted on a single communications channel. The spread spectrum signal which is produced, lies outside the bandwidth of the speech signal bandwidth.

- 2 -

This is in contrast to new claim 1 of the present invention which claims the two signals of the data being arranged to be in the same frequency band. This appears to be different to the citation where the spread spectrum signal which is produced, lies outside the bandwidth of the speech signal bandwidth. The arrangement of the citation does not seem to overcome the problems associated with the prior art whereby the data signals should have the same bandwidth as speech signals.

Reconsideration of the objections are respectively requested and we look forward to receiving further action in due course.

Yours faithfully

Philip Young
WILSON & YOUNG

Encl

CLAIMS

1. A method of transmitting frequency modulated data signals over a digital mobile phone network which filters the transmitted data signals, said method includes the step of providing original said frequency modulated data signals with more than one frequency,
5 wherein, the frequency modulated data signals having more than one frequency is achieved by generating a pseudo random sequence which does not overlap the frequency band of the FM data signals and mixing the sequence with the original data frequency modulated signals.
2. The method of transmitting frequency modulated data signals according to claim 1,
wherein the frequency modulated data signals having more than one frequency are also
10 modulated in amplitude.
3. The method of transmitting frequency modulated data signals according to claim 1,
wherein the pseudo random sequence has a lower frequency band than that of the original data frequency modulated signals.